

**BY ORDER OF THE
SECRETARY OF THE AIR FORCE**



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1 OCTOBER 2003

**AIR EDUCATION AND TRAINING COMMAND
Supplement 1**

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Maintenance

TECHNICAL ORDERS

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 21-3, *Technical Orders*. This instruction establishes policies and responsibilities for managing Technical Orders (TO). Guidance and general management procedures are contained in the 00-5-series TOs. Ensure that all records created by this AFI are maintained IAW AFMAN 37-123, *Management of Records*, and disposed of IAW AFMAN 37-139, *Records Disposition Schedule*.

This instruction applies to all major commands (MAJCOM), field operating agencies (FOA) and direct reporting units (DRU), including the Air Force Reserve Command and Air National Guard, who manage, acquire, prepare, maintain or use Air Force TOs. Send comments, questions, and suggested improvements on AF Form 847, **Recommendation for Change of Publication**, through channels to HQ USAF/ILMM, 1030 Air Force Pentagon, Washington DC 20330-1030 with an information copy to HQ AFMC/ENBP, 4375 Chidlaw Road, Wright-Patterson AFB OH 45433-5006. See **Attachment 1** for a glossary of references and supporting information.

(AETC) AFI 21-303, 1 October 2003, is supplemented as follows:

(AETC) This supplement applies to all AETC aircraft maintenance, trainer maintenance, and support equipment maintenance activities. It does not apply to Air Force Reserve Command or Air National Guard units. Maintain and dispose of records created as a result of processes prescribed in this publication in accordance with AFMAN 37-139, *Records Disposition Schedule*.

(AETC) Recommendations for change, improvement, or waivers to this instruction should be annotated on AETC Form 1236, **Request for Improving/Changing AETC Maintenance Regulations/Instructions**. Requests must be approved by the appropriate group commander (or squadron commander, if not assigned to a group) before forwarding to HQ AETC/LGM, 555 E Street East, Randolph AFB TX 78150-4440, for action by HQ AETC/LGMMP.

SUMMARY OF REVISIONS

Incorrect paragraph numbers were revised.

Chapter 1—PURPOSE, OVERVIEW, AND RESPONSIBILITIES	3
1.1. Purpose of Technical Orders.	3
1.2. Overview.	3
1.3. Responsibilities.	3
Chapter 2—TO POLICY	8
2.1. General TO Policy.	8
2.2. Comprehensive Air Force Technical Order Plan (CAFTOP)	8
2.3. Lead Command Assignment.	9
2.4. TO Update Policy.	9
2.5. TO Waivers.	9
2.5. (AETC)TO Waivers.	9
Chapter 3—TECHNICAL ORDER ACQUISITION	12
3.1. General.	12
3.2. Acquisition Requirements.	12
3.3. Preliminary Data.	12
3.4. TO Verification.	13
3.5. Delivery Requirements.	13
Chapter 4—CENTRALIZED TECHNICAL ORDER MANAGEMENT (CTOM) COMMITTEE	14
4.1. Purpose.	14
4.2. Organization.	14
4.3. CTOM Action Item Submittal.	14
4.4. (Added-AETC)Form Adopted.	15
Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION	16

Chapter 1

PURPOSE, OVERVIEW, AND RESPONSIBILITIES

1.1. Purpose of Technical Orders. Air Force TOs provide clear and concise instructions for safe and reliable operation, inspection and maintenance of centrally acquired and managed Air Force systems and commodities.

1.1.1. The Air Force vision is to provide all TO users with up-to-date, technically accurate, and user-friendly TOs. The Air Force goal is to provide real-time availability of current TOs electronically through a single point of access, viewable at the point of use using electronic tools (E-tools).

1.1.2. TOs contain instructions for the installation, operation, maintenance, inspection, enterprise network configuration, training, and support of weapon systems, weapon system components, support equipment, or other items procured by the Air Force. Authorized TO formats include, but are not limited to, hard copy, audio and visual displays and discs. The terms 'technical manual (TM)' and 'manual' are used interchangeably with the terms 'technical order' and 'TO'.

1.1.3. For information on TOs (points of contact, policy documents, latest policy initiatives, etc.), visit the TO System Information Page at: <http://www.ide.wpafb.af.mil/toprac/to-syste.htm>.

1.2. Overview.

1.2.1. TOs include all manuals developed or acquired for organic operation, maintenance, inspection, modification, or management of centrally-acquired and managed Air Force military systems and commodities. TOs include paper and digital media developed to Technical Manual Specifications and Standards (TMSS), non-embedded personal computer software which automates the function directed by a TO (without duplicating functionality of other Air Force Systems), contractor-developed manuals adopted for Air Force use, and approved commercial-off-the-shelf (COTS) manuals.

1.2.2. TOs are published under the authority of the Secretary of the Air Force (SAF) in accordance with (IAW) AFPD 21-3.

1.2.3. All situations cannot be covered by this instruction or the 00-5-series TOs; MAJCOMs may develop and document policies and procedures for those situations using MAJCOM supplements.

1.2.4. Flight Manuals are a type of TO with additional direction contained in AFI 11-215, *Flight Manuals Program (FMP)*.

1.2.5. The Air Force will merge multiple systems into a standard TO management system to automate TO management procedures.

1.2.6. The Air Force will maximize the use of commercial manuals under the applicable Federal Acquisition Regulations (FAR) and Department of Defense (DoD) guidelines and directives.

1.3. Responsibilities.

1.3.1. SAF/AQ (and SAF/US for Space Systems) will:

1.3.1.1. Ensure TOs are acquired for Air Force weapon systems and commodities IAW approved TMSS (TO 00-5-3, *AF Technical Manual Acquisition Procedures*, and TM-86-01, *Technical Manual Contract Requirements [TMCR]*).

1.3.1.2. Ensure all Air Force acquisition programs use the Air Force standard TO management system, unless waived by HQ USAF/IL.

1.3.2. HQ USAF/IL will:

1.3.2.1. Approve and issue Air Force policy for managing TOs and TO management systems and provide the final authority for waivers to that policy.

1.3.2.2. Establish and chair a MAJCOM-level centralized TO management (CTOM) committee to recommend TO policy improvements (see [Chapter 4](#)).

1.3.2.3. Approve adoption of new concepts and technologies for use with TOs and TO management systems.

1.3.2.4. Advocate lead command TO funding for TO sustainment and digitization based upon the Comprehensive Air Force TO Plan (CAFTOP). Develop an annual report on the status of TO funding and digitization.

1.3.2.5. Designate and advocate funding for the Air Force standard TO management system and ensure its interoperability with other DoD/AF automated information systems.

1.3.3. Lead Commands (AFPD 10-9, *Lead Operating Command Weapon Systems Management*, and AFI 10-901, *Lead Operating Command - Communications and Information Systems Management*) will:

1.3.3.1. Define user TO requirements for each assigned weapon system and commodity.

1.3.3.2. Validate CAFTOP documents, establish priorities, and provide funding for validated requirements. See additional responsibilities in [Chapter 2](#).

1.3.3.3. Coordinate TO acquisition, sustainment, and digitization efforts with operating and supporting MAJCOMs.

1.3.4. MAJCOMs will:

1.3.4.1. Assist Single Managers (SM) and the lead commands in determining TO requirements.

1.3.4.2. Identify TO training requirements through HQ Air Education and Training Command (AETC) and supplement available training as needed.

1.3.4.3. Coordinate with lead commands to plan and program for hardware, software and infrastructure requirements in support of digital data and E-Tool implementation.

1.3.4.4. Approve Nuclear Weapon and Explosives Ordnance Disposal (EOD) TO accounts.

1.3.4.5.

Identify a command office of primary responsibility (OPR) for TO issues and provide an Air Force CTOM Committee representative.

1.3.4.5. (AETC) The AETC centralized technical order management (CTOM) committee representative is HQ AETC/LGMMQ, 555 E Street East, Randolph AFB TX 78150-4440.

1.3.4.6. Support the CAFTOP process (see [Chapter 2](#)).

1.3.4.7. Provide personnel to support TO development activities (in process reviews [IPR], verification etc.) as required. Personnel shall have signature authority on TO matters during the developmental stage of the TOs.

1.3.5. HQ AETC will:

1.3.5.1. Designate a command point of contact (POC) for TO user training.

1.3.5.2. Ensure Air Force training is thorough and consistent with current Air Force TO policy and procedures.

1.3.5.3. Assist MAJCOMs in defining training requirements for development and revision of TO-related training.

1.3.6. AFMC will:

1.3.6.1. Develop and coordinate Air Force policy and procedures for TOs and the TO management system. Ensure maximum use of the standard TO management system. Collect and recommend disposition of waiver requests.

1.3.6.2. Develop a system that will provide all users the capability to update, view and recommend changes to all Air Force TOs at the point of use. Ensure interoperability with other Air Force and DoD automated information systems.

1.3.6.3. Manage the Air Force-assigned segment of the DoD TMSS program. Represent the Air Force in the DoD TMSS program. Review and approve/disapprove requests for deviations and waivers to Air Force TMSSs and Data Type Definitions (DTD) with concurrence of the lead command. Assist in resolving problems with Air Force TMSSs and DTDs.

1.3.6.4. Establish and maintain, in coordination with MAJCOMs, the TO Architecture/Transition Roadmap (Uniform Resource Locator [URL]
<https://www.afmc-mil.wpafb.af.mil/HQ-AFMC/EN/TOVision/>).

1.3.6.5. Establish FMP policy, guidance and procedures for the Air Force (AFI 11-215). The Flight Manual Program Manager is responsible for notifying using command Operations Directorates of any operational/flying issues resulting from a CTOM action/tasker.

1.3.6.6. Participate in DoD-directed programs to develop joint procedures for military departments (AFJI 21-301, *Interservicing of Technical Manuals and Related Technology Program*).

1.3.6.7. Centrally manage the assignment and use of Time Compliance Technical Order (TCTO) data code numbers and review and approve TO numbers.

1.3.6.8. Coordinate TO policy, procedures, and TO management system changes affecting TO user training with HQ AETC.

1.3.6.9. Serve as the functional manager for acquisition and sustainment of the Air Force standard TO management system, submitting budget requirements and managing allocated funds to support this system.

1.3.6.10. Assist SM/SCMs with pre-contract planning to determine appropriate digital formats for program TOs, ensure the latest version TMSS are placed on contract, and determine First Article Testing (FAT) requirements.

1.3.7. SMs and/or SCMs (as applicable) will:

- 1.3.7.1. Ensure all agreements and applicable contracts support Air Force TO policy and guidance.
- 1.3.7.2. Acquire and sustain TOs in support of lead command requirements.
- 1.3.7.3. Establish a TO management activity to manage the acquisition and sustainment of assigned equipment and commodity TOs. SMs/SCMs shall also:
 - 1.3.7.3.1. Appoint a Flight Manual Manager (FMM) to manage the FMP publication functions specified in AFI 11-215 for programs involving the acquisition or sustainment of aircraft.
 - 1.3.7.3.2. Manage Foreign Military Sales (FMS) TO programs IAW TO 00-5-19, *Security Assistance Technical Order Program*, and applicable Air Force publications.
- 1.3.7.4. Initiate and coordinate pre-contract planning with the Business Information System Program Office (SPO), Technical Data Division (MSG/MMF) to ensure the latest versions of TMSS are placed on contract and to determine First Article Testing (FAT) requirements.
- 1.3.7.5. Manage and control the distribution of Preliminary TOs (PTO) with lead command coordination.
- 1.3.7.6. Establish and manage a TO verification program.
- 1.3.7.7. Deliver formal TOs before or concurrently with fielding of operational assets.
- 1.3.7.8. Maintain TO and index information in the Air Force-approved TO management system. Include TOs managed in Contract Logistics Support (CLS) and Total System Performance Responsibility (TSPR) programs.
- 1.3.7.9. Manage the TO improvement process IAW timelines and procedures in TO 00-5-1, *AF Technical Order System*, and AFI 11-215.
- 1.3.7.10. Ensure digital TOs are available to authorized users through a repository that is or will be integrated with the Air Force technical data architecture, and a method is in place to incorporate changes to the data.
- 1.3.7.11. Issue documentation, in coordination with the using MAJCOM, that provides data beyond the scope of authorized TOs, or provides authorization to deviate from published TO parameters (TOs 00-25-107, *Maintenance Assistance*, and 00-25-108, *Communication-Electronic (C-E) Depot Support*).
- 1.3.7.12. Develop and maintain CAFTOP annexes. Ensure all TO requirements, including digitization plans, are documented in the CAFTOP annex. Submit CAFTOP annexes to the lead command for approval at least annually. See [Chapter 2](#) for additional CAFTOP requirements.
- 1.3.8. Air Force Operational Test and Evaluation Center (AFOTEC) will:
 - 1.3.8.1. Assist MAJCOMs during TO verification per agreement on a program-by-program basis (AFI 99-103, *Air Force Test and Evaluation*).
 - 1.3.8.2. Evaluate program TOs in conjunction with the user, and identify and report TO deficiencies according to the approved operational test and evaluation (OT&E) plan and the instructions contained in this instruction and 00-5-series TOs, as a part of all AFOTEC-managed OT&E.
- 1.3.9. TO-Using Organizations will:

- 1.3.9.1. As a minimum, establish a Technical Order Distribution Office (TODO) to administer organization TO requirements at the group level, in support of assigned group missions and activities. Each unit will appoint and train an alternate for each TODO and Technical Order Distribution Account (TODA) custodian.
- 1.3.9.2. Ensure TODOs, TODAs, TO library custodians and TO users have and/or obtain required training on the TO policies, processes, and management systems (see 00-5-series TOs).
- 1.3.9.3. Ensure compliance with TODO account management procedures in 00-5-series TOs through periodic inspections. Ensure users control and use TOs as organizational property in conjunction with official duties.
- 1.3.9.4. Submit TO change recommendations IAW TO 00-5-1 and AFI 11-215.
- 1.3.9.5. Ensure all TO users review TOs for accuracy, currency, releasability and security classification during use.
- 1.3.9.6. Wing/base commanders will assign a System Administrator (SA) for Air Force approved TO management system servers hosted at their locations.
- 1.3.10. Technical Order Distribution Offices (TODO) will:
 - 1.3.10.1. Establish and maintain TO distribution accounts IAW 00-5-series TOs.
 - 1.3.10.2. Access 00-5-series TOs and the TO Catalog via the Internet (DoD TODO and TODA personnel).
 - 1.3.10.3. Establish ID for the TO Catalog on CD-ROM, TO 0-1-CD-1, *USAF Technical Order Catalog* (Non-DoD, U.S. TODOs).
 - 1.3.10.4. Ensure library custodians obtain access to 00-5-series TOs.
 - 1.3.10.5. Comply with disclosure and releasability policies in AFI 16-201 (C), *Disclosure of Military Information to Foreign Governments and International Organizations* (U), AFI 61-204, *Disseminating Scientific and Technical Information*, and other Air Force and DoD instructions.

Chapter 2

TO POLICY

2.1. General TO Policy.

2.1.1. TOs will have a unique, centrally assigned TO number, IAW TO 00-5-18, *USAF Technical Order Numbering System*, and be indexed and managed within the Air Force-approved TO management system.

2.1.2. A record copy of each TO shall be filed with the Air Force repository, IAW AFMAN 37-139, *Records Disposition Schedule*, Table 37-9, Rule 3.

2.1.3. System modifications (other than temporary modifications) and initial or one-time inspections, to be performed by Air Force organic resources, must be documented and managed as TCTOs IAW TO 00-5-15, *Air Force Time Compliance Technical Order Process*.

2.1.4. TO training is required for all Air Force TODO and TODA personnel and TO library custodians, IAW 00-5-series TOs.

2.1.5. All suppliers and users of Air Force TOs shall use the Air Force standard TO management system in the performance of their duties, unless specifically waived by HQ USAF/IL.

2.1.6. Air Force agencies developing new techniques or concepts relating to TOs that require research and development (R&D) must submit a mission need statement (MNS) to HQ USAF/IL for approval, according to AFI 10-601, *Mission Needs and Operational Requirements Guidance and Procedures*.

2.1.7. TOs will only be distributed at the direction of the TO Manager.

2.1.8. Air Force personnel will use TOs to operate and maintain centrally acquired systems and commodities IAW AFPD 21-3.

2.2. Comprehensive Air Force Technical Order Plan (CAFTOP)

2.2.1. CAFTOP is a compilation of management plans for all AF TOs. The CAFTOP is comprised of annexes and applies to all Air Force programs regardless of support concept and life cycle. The CAFTOP annex identifies SM and lead command mutual agreements about sustainment and digitization processes, future plans, etc. SMs will submit a CAFTOP annex covering their assigned TOs to lead command for approval annually. Lead command approval must be at the three-digit level.

2.2.2. Each annex is a TO management plan for a specific list of technical orders. Annexes identify the lead command responsible for a specific set of TOs, establish technical requirements for digitizing, acquiring, sustaining and distributing TOs, and justify TO funding. Annexes also identify current status, overall health, and provide a future roadmap for each program's TOs to include plans, schedules, and progress in converting to appropriate digital formats. CAFTOP annexes are an integral part of the TO requirements process used to advocate funding for technical orders.

2.2.3. AFMC will provide specific instructions on the CAFTOP annex format in conjunction with the annual data call guidance.

2.3. Lead Command Assignment.

2.3.1. Systems and equipment are assigned to lead commands for programming and budgeting purposes IAW AFD 10-9. Command, control, communications, and computers (C4) lead command assignments are on a web site referenced in AFI 10-901. Lead commands will include supporting TOs in the programming and budgeting process.

2.3.2. Lead commands are advocates for their assigned TOs and respond to issues addressing TO status and use. Advocacy includes planning, programming, digitizing and budgeting for designated TOs. The lead command will include using command TO requirements.

2.3.3. Lead commands "accept" assignment of a TO when the CAFTOP Annex submitted by the SM is "approved" by the lead command. When a lead command cannot be identified for a specific TO through mutual agreement between a lead command and SM, HQ USAF/ILM will assign a lead command.

2.3.4. AFMC is the lead command for TOs that qualify for funding in the Air Force Working Capital Fund (AFWCF), Supply Management Activity Group (SMAG), and Depot Maintenance Activity Group (DMAG).

2.4. TO Update Policy.

2.4.1. TOs will be updated and improved using revisions, changes, and supplements IAW the 00-5-series TOs and AFI 11-215.

2.4.2. Paper media will not be used to supplement digital TOs. Digital copies of TOs will be updated using digital files, and paper copies of TOs will be updated using paper.

2.4.3. TO updates affecting the basic TO and associated or integrated checklist updates will be distributed concurrently. Likewise, when a TO is available in more than one format (e.g., paper and DVD), updates to all formats will be distributed concurrently to minimize data conflicts.

2.4.4. Security Classification. TOs can be Unclassified, Confidential, or Secret. Those that contain Restricted Data (RD), Formerly Restricted Data (FRD), or Critical Nuclear Weapons Design Information (CNWDI) will be marked with the additional warning notices described in DOD 5200.1-R, *Information Security Program*, and AFI 31-401, *Information Security Program Management*. "For Official Use Only" (FOUO) is not authorized for use in marking TOs.

2.4.5. TOs will not be released to foreign nations or their nationals except under the conditions prescribed in AFI 16-201 and TO 00-5-19.

2.4.6. TOs or portions of TOs may be reproduced IAW 00-5-series TOs. Do not reproduce TOs for use outside the U.S. government or an authorized government contractor except when authorized by the responsible technical content manager (TCM) and Foreign Disclosure Office (FDO).

2.5. TO Waivers. Requests for waivers of TO system policies in this AFI must be submitted through the parent MAJCOM to HQ USAF/ILMM for approval or disapproval, with an information copy to HQ AFMC/ENBP.

2.5. (AETC) TO Waivers. Submit requests for waivers through HQ AETC/LGMMP.

2.5.1. Emergency Waivers. On-scene commanders are granted broad discretionary powers to waive compliance with TO procedures in emergency situations. Use waiver authority with caution to avoid

placing personnel or equipment in jeopardy. The situation must be documented and sent to HQ USAF/ILMM and HQ AFMC/ENBP after the emergency is resolved.

2.5.2. Combat Zones and Emergency War Order (EWO) Tasked Systems and Equipment.

2.5.2.1. In areas engaged in actual combat operations, for systems or components which are on or supporting EWO alert taskings, and for systems or components engaged in contingency operations, the MAJCOM or responsible unit commander may temporarily waive specific TO compliance until operational capability permits or safety of personnel is assured.

2.5.2.2. TOs issued to correct deficiencies (supplements, changes, etc.) are mandatory for compliance, but they may be accomplished on a phased basis to minimize the impact on EWO posture.

2.5.2.3. TCTOs or master change logs that have been issued for immediate action will be completed within specified time limits or the affected equipment will be removed from service. However, MAJCOMs may authorize waivers to removal from service requirements when high priority, unscheduled special missions preclude accomplishment within the specified time limit.

2.5.2.4. Authorize temporary waivers for compliance on aircraft and aircraft systems as follows:

2.5.2.4.1. The responsible Group commander or designated official, or the SM, through the on-site chief of an AFMC repair team (when an aircraft is possessed by AFMC), may temporarily waive compliance with any type of TO when assigned aircraft are required for rescue missions, including combat rescue missions, where loss of life or capture of friendly forces may occur and the aircraft is the only vehicle immediately available to make the rescue.

2.5.2.4.2. The responsible Group commander or designated official, or the SM, through the on-site chief of an AFMC repair team (when an aircraft is possessed by AFMC), may temporarily waive compliance with any type of TO for evacuation flight and return, when a natural disaster (flood, hurricane, typhoon, etc.) threatens aircraft.

2.5.2.4.3. When transferring aircraft, MAJCOMs may authorize the use of waiver provisions listed in TO 00-20-1, *Aerospace Equipment Maintenance General Policies and Procedures*, provided both the losing and gaining commands agree.

2.5.2.4.4. Special TJ-coded (Ground Use Only) aircraft (AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*) require TO compliance only on those systems designated for training purposes. Modify aircraft auxiliary systems to support the primary system as necessary.

2.5.3. Systems Under Evaluation.

2.5.3.1. SMs may authorize temporary waivers, not to exceed 12 months for ground communication-electronics systems and six months for aircraft, missiles and other equipment in acquisition. The temporary waiver allows time to assess the need for engineering, maintenance, or operational changes.

2.5.3.2. When using aircraft or missiles for flight test purposes, commanders may temporarily waive compliance with immediate and urgent action TCTOs only when flights are required to determine or assess a solution for a condition pertaining to the affected TCTO.

2.5.3.3. Contractors or other government agencies (National Aeronautics and Space Administration, Federal Aviation Administration, Army, etc.) using Air Force aircraft for test purposes

(AFPD 99-1, *Test and Evaluation Process*, and associated instructions) request temporary waivers from compliance with immediate, urgent, and routine action safety TCTOs only when flights are required to determine or assess a solution for a condition pertaining to the TCTO requirement.

2.5.3.3.1. Request temporary waivers from compliance with routine action mission essential TCTOs only if compliance would seriously affect mission accomplishment.

2.5.3.3.2. All waiver requests require approval of the SM activity having responsibility for maintenance management of the aircraft and equipment, and the responsible procurement activity.

2.5.3.3.3. Record TCTO waivers on the AFTO Form 95, **Significant Historical Data**, or the mechanized TCTO status report, as applicable. The entry will indicate the reason and estimated date of compliance. The local defense plant representative or senior contractor maintenance official signs and validates these entries.

2.5.3.4. When TCTOs are applicable to components of a system or subsystem which are deactivated, modified, or removed from the aircraft because of R&D missions, noncompliance will be recorded according to paragraph [2.5.3.3.3](#). The wing operations or maintenance group commanders, equivalent cognizant officials in non-Air Force government organizations, or local defense plant representative or senior contractor maintenance official for contractor-operated equipment must sign and validate the entries. Accomplish all outstanding TCTOs when the components are reinstalled in the aircraft, or before the aircraft is transferred to an Air Force facility.

2.5.4. Ground Communications-Electronics (C-E) Training Systems. The chief of C-E maintenance, with the concurrence of the applicable AETC training supervisor, may waive compliance with those TO requirements which are jointly determined as not applicable or not economically justified because of the training environment. When considered an essential waiver, the commander will ensure the chief of C-E maintenance of the maintaining organization establishes maintenance practices and maintains AETC ground C-E training equipment to standards that fulfill AETC mission requirements. Review waivers granted in the AETC environment annually and update as TO and/or training requirements change.

2.5.5. Methods and Procedures TOs (MPTO). MAJCOMs may not waive compliance with policies in MPTOs unless specifically authorized within the individual TO. When a waiver is considered necessary, the MAJCOM will forward a request to the HQ USAF OPR for the affected TO. The request must contain full justification for the waiver and a description of the alternate procedure.

Chapter 3

TECHNICAL ORDER ACQUISITION

3.1. General.

3.1.1. Acquire TOs according to DOD 5010.12-M, *Procedures for the Acquisition and Management of Technical Data*, on a separate contract line item number (CLIN), using a contract exhibit consisting of a DD Form 1423, **Contract Data Requirements List (CDRL)**, with a program-specific (tailored) TM-86-01 document (see 00-5-series TOs). The TM-86-01 is available digitally on the TO System Information web site at URL <http://www.ide.wpafb.af.mil/toprac/to-syste.htm>, under the “TO Acquisition Tools” link.

3.1.2. Develop all TOs IAW approved government TMSS –(see TO 00-5-3). MSG/MMF must approve the use of non-government (commercial) standards (NGS) instead of military standards (MIL-STD), military performance (MIL-PRF) or military detail (MIL-DTL) specifications for TO development, with the concurrence of the lead command.

3.2. Acquisition Requirements.

3.2.1. Contracts must provide an opportunity for government review and approval of revisions, changes, and supplements to TOs.

3.2.2. Existing COTS operating instructions, part breakdown handbooks, and repair manuals will be acquired instead of developing new TOs if no degradation in program operation, safety, support, or reliability will result. COTS manuals will be reviewed and approved by the TO Manager, lead command, and TCM. See military handbook (MIL-HDBK)-1221, *DoD Handbook for Evaluation of Commercial Off-the-Shelf (COTS) Manuals*, TO 00-5-1 and TO 00-5-3. The Air Force must receive at least government purpose license rights for COTS manuals; unlimited rights are recommended whenever possible.

3.2.3. Review available manuals from other government departments or agencies to determine adequacy and application to particular programs.

3.2.4. Acquisition programs will submit a CAFTOP Annex describing the initial and future plans for procuring, developing, sustaining and transitioning tech data. Submit CAFTOP annexes to the lead command for approval at least annually.

3.2.5. Acquisition program TO managers will include a copy of the Comprehensive Air Force Technical Order Plan Annex as an attachment to the Single Manager Product Support Management Plan (AFI 63-107, *Integrated Product Support Planning and Assessment*).

3.3. Preliminary Data.

3.3.1. The contractor quality assurance process must certify that preliminary TOs (PTO) conform to government requirements IAW TO 00-5-3 before they are delivered to the government for verification.

3.3.2. Formatted PTOs should be verified during Air Force developmental test and evaluation (DT&E), TCTO verification and trial equipment installations. Use formal TOs or verified PTOs dur-

ing operational test & evaluation (OT&E). If DT&E and OT&E have been combined, PTO verification may be accomplished during OT&E with written approval of the performing MAJCOM.

3.3.3. PTOs may be used initially for development of training plans and course syllabuses. PTOs are formalized IAW TO 00-5-3. Formalization is indicated when a TO update removes the word “PRELIMINARY” from the title page.

3.3.4. Verification status pages (VSP) will be included in all TOs and PTOs that contain unverified procedures (MIL-STD-38784, *Standard Practice for Manuals, Technical: General Style and Format Requirements*). Digital TOs will also include a VSP or verification status screen. Non-procedural TOs (MPTOs, Illustrated Parts Breakdowns, Work Unit Code manuals, etc.), do not require VSPs.

3.3.5. Operational units will NOT use preliminary data for hands-on training, operations, or maintenance unless authorized in writing by the TO manager, with lead command concurrence and notification to affected using commands. Authorization will not exceed 180 days. The SM must authorize any use exceeding 180 days, with lead command concurrence. The authorization/extension letter must accompany the data at all times.

3.4. TO Verification. All operational, maintenance, and calibration tasks contained in TOs and Air Force supplements to commercial manuals must be 100 percent verified using one of the accepted methods specified in TO 00-5-3. See TO 00-5-1 for using command verification requirements. Do NOT use unverified procedures in the operational environment.

3.5. Delivery Requirements.

3.5.1. Deliver formal, verified on-equipment TOs and off-equipment PTOs concurrently with or prior to deployment of production assets to the using command. Deliver depot level PTOs prior to prototyping the depot overhaul procedures.

3.5.2. For document based TOs, deliver data as non-proprietary, standard generalized markup language (SGML)- or extensible markup language (XML)-tagged files, compatible with Air Force-approved DoD or industry standards in effect at time of acquisition, as directed by the lead command based on requirements and funding.

3.5.3. For non-document based TOs, i.e., a data base of technical information, acquire and sustain weapon system maintenance technical data in a non-proprietary SGML- or XML-tagged interactive electronic technical manual (IETM) format compatible with Air Force-approved DoD or industry standards in effect at time of acquisition, as directed by the lead command based on requirements and funding.

Chapter 4

CENTRALIZED TECHNICAL ORDER MANAGEMENT (CTOM) COMMITTEE

4.1. Purpose. The CTOM Committee recommends policy and procedures required to enable the Air Force TO Vision and Concept of Operations (CONOPS).

4.2. Organization.

4.2.1. The CTOM Committee is a working level group that reviews and recommends Air Force policy and procedures relating to TOs. The CTOM Committee makes recommendations using a majority-voting program, with one vote per MAJCOM. HQ USAF/ILMM chairs the committee and provides final recommendations. HQ AFMC/ENBP is the committee manager. The CTOM Committee meets semiannually as a minimum.

4.2.1.1. Members^{1,2} of the CTOM Committee are:

HQ ACC/LGMT	HQ AMC/LGMM	HQ AETC/LGMM/DOOM ³
HQ USAFE/LGMM	HQ PACAF/LGMM	HQ ANG/LGMM
HQ AFMC/ENB/LGMM ³	HQ AFRC/LGQR	HQ AFSOC/LGMM
HQ AFSPC/LGMM	HQ AFCA/WFLM	AFOTEC Det 3/TL
AFSAC/IAS ⁴		MSG/MMF ⁵

NOTES:

1. CTOM members unable to attend meetings in person may delegate their vote to another MAJCOM voting member attending the meeting.
2. Other activities may participate in the CTOM Committee on a non-voting basis to address specific issues. AFMC center representatives may be invited to provide expertise on TO acquisition and sustainment.
3. Single vote.
4. Vote only on subjects affecting FMS.
5. Technical support (non-voting).

4.2.2. HQ USAF/ILMM issues taskings by letter to form working groups (WG). WGs prepare minutes of each meeting. The CTOM Committee approves or disapproves WG recommendations.

4.3. CTOM Action Item Submittal. Any individual or agency that develops, acquires, or uses TOs may submit suggested action items through their parent MAJCOM or FOA CTOM Committee representative.

4.3.1. Action item submissions will include a statement of the problem or initiative, the suggested corrective action or approach, previous actions taken by the initiator to correct the problem, any anticipated benefits, costs, and effects on TO program users and identification of the initiator.

4.3.2. The Committee representative will validate the action item, provide any previous actions to correct the situation, and determine resources available to work the problem. The committee manager (HQ AFMC/ENBP) will submit the action item for inclusion in the next meeting agenda.

4.4. (Added-AETC) Form Adopted. AETC Form 1236.

MICHAEL E. ZETTLER, Lieutenant General, USAF
DCS/Installations and Logistics

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

DOD 5010.12-M, *Procedures for the Acquisition and Management of Technical Data*

DOD 5200.1-R, *Information Security Program*

DODD 5330.3/AF Sup, *Defense Automated Printing Service (DAPS)*

AFI 10-601, *Mission Needs and Operational Requirements Guidance and Procedures*

AFPD 10-9, *Lead Operating Command Weapon Systems Management*

AFI 10-901, *Lead Operating Command--Communications and Information Systems Management*

AFI 11-215, *Flight Manuals Program (FMP)*

AFI 16-201 (C), *Disclosure of Military Information to Foreign Governments and International Organizations (U)*

AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*

AFI 21-101, *Aerospace Equipment Maintenance Management*

AFI 21-113, *Air Force Metrology and Calibration (AFMETCAL) Program*

AFPD 21-3, *Technical Orders*

AFJI 21-301, *Interservicing of Technical Manuals and Related Technology*

AFI 31-401, *Information Security Program Management*

AFPD 32-70, *Environmental Quality*

AFI 33-360V1, *Publications Management Program*

AFI 33-360V2, *Forms Management Program*

AFMAN 37-139, *Records Disposition Schedule*

AFPD 38-4, *The Innovative Development Through Employee Awareness (IDEA) Program*

AFI 38-401, *The Air Force Innovative Development Through Employee Awareness (IDEA) Program*

AFI 61-204, *Disseminating Scientific and Technical Information*

AFI 63-107, *Integrated Product Support Planning and Assessment*

AFI 91-103, *Air Force Nuclear Safety Certification Program*

AFPD 99-1, *Test and Evaluation Process*

AFI 99-102, *Operational Test and Evaluation*

AFI 99-103, *Air Force Test and Evaluation*

TO 00-5-1, *AF Technical Order System*

TO 00-5-2, *Technical Order Distribution System*

TO 00-5-3, *AF Technical Manual Acquisition Procedures*

TO 00-5-15, *Air Force Time Compliance Technical Order System*

TO 00-5-18, *USAF Technical Order Numbering System*

TO 00-5-19, *Security Assistance Technical Order Program*

TO 00-20-1, *Aerospace Equipment Maintenance General Policies and Procedures*

TO 00-25-107, *Maintenance Assistance*

TO 00-25-108, *Communications-Electronics (C-E) Depot Support*

TM-86-01, *Air Force Technical Manual Contract Requirements (TMCR)*

MIL-HDBK-1221, *Department of Defense Handbook for Evaluation of Commercial Off-The-Shelf (COTS) Manuals*

MIL-STD-38784, *Standard Practice for Manuals, Technical: General Style and Format Requirements*

Abbreviations and Acronyms

ACC—Air Combat Command

AETC—Air Education and Training Command

AF—Air Force

AFCA—Air Force Communications Agency

AFI—Air Force Instruction

AFJI—Air Force Joint Instruction

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFOTEC—Air Force Operational Test and Evaluation Center

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFSAC—Air Force Security Assistance Center (AFMC)

AFSOC—Air Force Special Operations Command

AFSPC—Air Force Space Command

AFTO—Air Force Technical Order

AFWCF—Air Force Working Capital Fund

ALC—Air Logistics Center

AMC—Air Mobility Command

ANG—Air National Guard

ATA—Air Transport Association

CAFTOP—Comprehensive Air Force Technical Order Plan
CD-ROM—Compact Disk-Read Only Memory
CDRL—Contract Data Requirements List
C-E—Communications-Electronics
CLIN—Contract Line Item Number
CLS/CS—Contractor Logistics Support/ Contractor Support
CNWDI—Critical Nuclear Weapon Design Information
CONOPS—Concept of Operations
COTS—Commercial Off-the-Shelf (Hardware, Software or Manuals)
CTOM—Centralized Technical Order Management (Committee)
DCS—Deputy Chief of Staff
DMAG—Depot Maintenance Activity Group
DoD—Department of Defense
DRU—Direct Reporting Unit
DT&E—Developmental Test & Evaluation
DTD—Document Type Definition
EOD—Explosive Ordnance Disposal
E-Tools—Electronic Tools
EWO—Emergency War Order
FAT—First Article Test
FDO—Foreign Disclosure Office
FMM—Flight Manual Manager
FMP—Flight Manuals Program
FMS—Foreign Military Sales
FOA—Field Operating Agency
FOUO—For Official Use Only
FRD—Formerly Restricted Data
HQ—Headquarters
IAW—In Accordance With
ID—Initial Distribution
IETM—Interactive Electronic Technical Manual
IOS—Interim Operational Supplement

IPR—In Process Review
ISS—Interim Safety Supplement
JCALs—Joint Computer-aided Acquisition and Logistics Support
MAJCOM—Major Command
MIL-DTL—Military Detail (specification)
MIL-HDBK—Military Handbook
MIL-PRF—Military Performance (Specification)
MILSPEC—Military Specification
MIL-STD—Military Standard
MNS—Mission Need Statement
MPTO—Methods and Procedures TO
MSG—Materiel Systems Group (AFMC)
NGS—Non-Government Standard
NSN—National Stock Number
O&M—Operations and Maintenance
OPR—Office of Primary Responsibility
OS—Operational Supplement
OT&E—Operational Test and Evaluation
PDF—Portable Document Format
PGM—Product Group Manager
POC—Point of Contact
PTO—Preliminary Technical Order
R&D—Research and Development
RD—Restricted Data
SA—System Administrator
SAF—Secretary of the Air Force
SCM—Supply Chain Manager
SGML—Standard Generalized Markup Language
SM—Single Manager (AFMC)
SMAG—Supply Management Activity Group
SPD—System Program Director
SPO—System Program Office

SS—Safety Supplement

TCM—Technical Content Manager

TCTO—Time Compliance TO

TM—Technical Manual

TMCR—TM Contract Requirements (document)

TMSS—TM Specifications and Standards

TO—Technical Order

TODA—TO Distribution Account

TODO—TO Distribution Office

TOPR—TO Publication Request

TOPS—TO Page Supplement

TSPR—Total System Performance Responsibility

USAF—United States Air Force

VSP—Verification Status Page

WG—Working Group

Terms

CENTRALLY ACQUIRED—Acquired and managed by an agency, usually an AFMC activity, for the entire Air Force. The opposite term is “locally acquired,” bought by a local unit for its own use.

COMMERCIAL MANUALS—Commercial manuals fall into two broad categories, defined below:

COMMERCIAL-OFF-THE-SHELF (COTS) MANUALS—COTS manuals are those technical publications developed by vendors to support their commercially available products, and may include users manuals, parts lists, schematics, etc. Generally, COTS manuals do not require verification.

MILITARY COMMERCIAL MANUALS—Manuals developed to commercial specifications (e.g., Air Transport Association [ATA]-100 for aircraft manuals) for support of programs and commodities developed specifically for the military. When used by government personnel, these manuals must be verified just like military specification manuals.

COMMODITY—A group or range of items, managed in Product Groups, which possess similar characteristics, have similar applications, and benefit from similar developmental, acquisition, and logistics support management processes.

DIGITAL SYSTEM—A system is a collection of elements or components that are organized for a common purpose. A digital system consists of hardware and software components making up a system used to accomplish functions and tasks electronically (e.g., the Joint Computer-aided Acquisition and Logistics Support [JCALS] system).

DOCUMENT BASED TOs—TO files or instances that are structured, organized, constructed and managed as single complete document files. These TOs may be presented in either a page format (i.e.,

when published to paper or Adobe® Portable Document Format [PDF]™ files) or may be rendered in a non-page, hyperlinked format through an electronic viewer.

FLIGHT MANUAL MANAGER (FMM)—The individual responsible for managing the technical content of FMP publications. This includes initial acquisition and verification, maintenance, and periodic reviews.

FLIGHT MANUAL PROGRAM (FMP) PUBLICATIONS (Flight Manuals)—These TO category 1 publications contain information on an aircraft, its equipment, operation and characteristics. They include flight manuals (-1 series), air refueling procedures (1-1C-1 series), etc. See AFI 11-215.

FORMAL TO—MILSPEC-developed TOs approved for operation and maintenance that are printed and available for distribution in the TO program. Formal TOs include commercial manuals accepted for Air Force use and assigned a TO number.

FORMAT—*n.* **1.** The shape, size, binding, typeface, paper and general makeup or arrangement of a publication, as determined by military or commercial specifications and standards; **2.** Digital files developed to a particular computer application, such as Microsoft® Word™, Adobe® PDF™, or SGML tagged; **3.** Publication medium, such as paper versus digital. – *v.* To arrange a document or publication according to a specific format.

GOVERNMENT PURPOSE LICENSE RIGHTS—These are rights to use, reproduce, display or disclose technical data, in whole or in part and in any manner, for Government purposes only and to permit others to do so for Government purposes only. Includes purposes of competitive procurement but does not grant to the Government the right to have or permit others to use technical data for commercial purposes.

MAJOR COMMAND—The highest-level activity responsible for management, operation and command control of a military program or commodity. As used in this instruction, major command includes FOAs and DRUs.

METHODS AND PROCEDURES TOs (MPTO)—MPTOs (category 00) are general in content and are not issued against specific military systems or commodities. There are two classes of MPTOs: those which specify policy, methods and procedures relating to the TO system, maintenance management, administration, inspection of Air Force equipment, control and use of repairable assets, configuration management, etc.; and those which involve policies, methods and procedures relating to ground handling of aerospace vehicles, general maintenance practices, management of precision measurement equipment, and the safe use of Air Force equipment.

MILITARY SPECIFICATION MANUALS—These are TMs and TOs developed according to military standards and performance specifications.

MILITARY SYSTEM—The generic phrase used to describe the systems developed and supported by DoD activities. The specific definition is: “A discrete stand-alone collection of systems and related resources which, in conjunction with user support and operation, provides a capability to accomplish a specific military mission.”

NON-DOCUMENT-BASED DATA—Files which are typically database oriented. Technical content of Air Force TOs will exist as individual objects or files managed by a database management system. The individual objects are chunks of data much smaller than an entire document, and are pulled together and presented in a logical presentation on an electronic viewer. Limited printing of the technical information may be possible.

OPERATIONAL ENVIRONMENT—‘Operational environment,’ as used in this AFI, includes all locations performing all operations and maintenance tasks except those directly involved in research, development, test and evaluation (RDT&E).

ORGANIC—The term organic, as used in this instruction, refers government resources and activities, as opposed to contractor resources and activities.

PRELIMINARY TECHNICAL ORDERS (PTO)—PTOs are copies of TOs prepared in limited quantities during TO acquisition to support IPRs, contractor certification, and verification of data against the acquired military system/commodity. PTOs are produced in limited quantities for Air Force personnel to review and verify the contents during acquisition, and for development of initial training packages (00-5-series TOs).

SINGLE MANAGER (SM)—SMs are responsible to their customers for all aspects of the planning, development, sustainment, and evolution of the products they acquire and support. SMs serve as the single-face-to-the-user for their respective systems or products. SMs are responsible for program performance and overall health of the product. The SM is the system program director (SPD) of a system or the product group manager (PGM) of a product line.

SUPPLY CHAIN MANAGER (SCM)—Designated individual(s) at an ALC responsible for managing a line of national stock number (NSN)-coded items. SCM functions include requirements determination; cataloging, standardization and engineering data management; stock control and distribution; technical management functions; and pricing for their assigned items. SCMs report to ALC Commanders, but are responsible for supplying, repairing, and managing materiel to support SMs.

SUPPLEMENTS—Supplements are issued to augment or change data in the basic TO without replacing the existing pages. Authorized types are formal and interim operational and safety supplements (OS, SS, IOS & ISS), TO page supplements (TOPS), and interim and formal TCTO supplements.

SYSTEM PROGRAM OFFICE (SPO)—The integrated organization responsible for cradle-to-grave military program management.

TECHNICAL CONTENT MANAGER (TCM)—The individual or office responsible for the accuracy, adequacy, modification, classification and review of TO procedures, engineering data and the related technical contents of a TO. TCMs are not generally responsible for style and format or other non-technical aspects of manuals.

TECHNICAL DATA—Technical data is defined in public law as “recorded information (regardless of the form or method of recording) of a scientific or technical nature (including software documentation) relating to supplies procured by an agency. Technical data does not include computer software or financial, administrative, cost or pricing, or management data or other information incidental to contract administration.” This definition includes engineering data, source data and TO data (for example, schematic diagrams, flow diagrams, manufacturer handbooks, manuscripts of O&M instructions, PTOs, commercial TMs, R&D TMs, and other program or equipment O&M procedures developed under AFMC or other acquisition agency directions during the program acquisition phase). Avoid use of this term when referring to specific types of data.

TECHNICAL MANUAL (TM)—A document that contains operational or maintenance instructions, parts lists or parts breakdown, or other related technical information or procedures (exclusive of administrative procedures) for a weapon program, weapon program component, support equipment, or

other item procured by DoD. Data can take any form (e.g. hard copy, audio and visual displays, magnetic tape, disks, or other electronic devices). Technical order (TO) is another term used for technical manual.

TECHNICAL MANUAL CONTRACT REQUIREMENTS (TMCR) DOCUMENT,

TM-86-01—The document approved for use by the Department of the Air Force to acquire TOs. It fully describes statement of work criteria for contractor program management, TO quality assurance, TO development and update, TCTOs, delivery instructions, generic tailoring of the approved standards and specifications, and the requirements of JCALS.

TECHNICAL ORDER (TO)—Technical manuals issued as military orders in the name of the Air Force Chief of Staff and by order of the Secretary of the Air Force, IAW AFD 21-3. Noncompliance with TOs is punishable under Article 92 of the Uniform Code of Military Justice. TOs are either developed to TMSS or are commercial manuals reviewed and accepted as TOs IAW MIL-HDBK-1221. The term “TO” is equivalent to the DoD term “TM.”

TECHNICAL ORDER DISTRIBUTION OFFICE (TODO)—The office or individual responsible for providing TO account administrative services for a unit or activity. These services will include consolidation and submission of requirements for initial distribution (ID) of TOs/TO updates, receipt and distribution of TOs to unit or activity TO library custodians and oversight of TO library operations.

TECHNICAL ORDER LIBRARY—A TO library consists of one or more TOs maintained by individuals or offices for continuing use. Authorized TO libraries (see TO 00-5-1) require distribution of all TO updates to ensure included TOs are current.

TECHNICAL ORDER MANAGEMENT SYSTEMS—TO management systems are comprised of the hardware and software programs developed to facilitate the management, acquisition, improvement, publication, stocking and distribution of Air Force TOs. The multiple systems currently in use will be merged into a single, Air Force standard enterprise system capable of the wholesale and retail management of TOs for their entire life cycle.

TECHNICAL ORDER MANAGER—As used in this instruction, refers to either the individual manager or agency responsible for managing the TO portion of a specific military program or commodity program. TO Manager responsibilities include acquisition, update, indexing, publishing, storage and distribution of TOs and related technical data IAW AFD 21-3 and 00-5-series TOs.

TECHNICAL ORDER SYSTEM—The Air Force specialized publication system established by AFD 21-3, IAW AFI 33-360V1, *Publications Management Program*, for the acquisition, management, publication, filing, and use of technical manuals. The TO System includes the hardware and software for the standard TO management system, personnel and facilities, and all manuals developed or acquired for organic operation, maintenance, inspection, modification, or management of centrally-acquired and managed Air Force military programs and commodities. This includes paper and digital copies of manuals developed IAW TMSS, non-embedded personal computer software which automates the function directed by a TO, contractor-developed manuals adopted for Air Force use, and approved commercial-off-the-shelf (COTS) manuals.